

Listing of Claims

1. (original) A substantially pure composition of mammalian megakaryocyte progenitor cells, wherein at least 80% of the cells in said composition are characterized as CD41⁺, CD9⁺, CD34⁺.

2. (original) The composition according to Claim 1, wherein said cells are further characterized as lineage panel.

3. (original) The composition according to Claim 2, wherein said lineage panel includes CD2; CD3; CD4; CD7; CD8; CD10; CD11b; CD14; CD19; CD20; CD56; and glycophorin A (GPA).

4. (original) The composition of Claim 1, wherein said megakaryocyte progenitor cells, when cultured in methylcellulose in the presence of steel factor (SLF), flt-3 ligand (FL), interleukin (IL)-3, IL-11, GM-CSF, thrombopoietin (Tpo) and erythropoietin (Epo) give rise to megakaryocyte colonies.

5. (original) The composition of Claim 1, wherein said megakaryocyte progenitors are mouse cells.

6. (original) The composition of Claim 1, wherein said cells are genetically modified to comprise an exogenous DNA vector.

7. (currently amended) A method of enrichment for a composition of mammalian megakaryocyte progenitor cells, wherein at least ~~90%~~ 80% of the cells in said composition are characterized as CD41⁺, CD9⁺, CD34⁺, the method comprising:

combining reagents that specifically recognize CD41, CD9 and CD34 with a sample of hematopoietic cells; and

selecting for those cells that are CD41⁺, CD9⁺, CD34⁺, to provide an enriched population of cells having megakaryocyte progenitor activity.

8. (withdrawn) The method according to Claim 7, wherein said sample of hematopoietic cells is bone marrow.

9. (withdrawn) The method according to Claim 8, wherein said sample of hematopoietic cells is mobilized peripheral blood.

10-11 (canceled)

12. (withdrawn) A method of providing platelets to a mammalian recipient, the method comprising:

administering to said recipient a population of megakaryocyte progenitor cells, wherein at least 80% of the cells in said population are characterized as CD41⁺, CD9⁺, CD34⁺;
wherein said megakaryocyte progenitor cells give rise to platelets *in vivo*.

13. (withdrawn) The method according to Claim 12, further comprising administration of thrombopoietin or a mimetic thereof in conjunction with said megakaryocyte progenitor cells.

14. (canceled)